Recently, there is much progress in practical computations of general one-loop scattering amplitudes. For example, in [1], an economical method for the calculation of one-loop amplitudes in terms of the so-called master integrals has been proposed. This method is based on the idea of unitary cuts so that a one-loop amplitude is essentially obtained by tree-level amplitudes with a knowledge of coefficients for the master integrals. The article under review shows further developments along this direction. The developments include clarification of polynomial structures in one-loop amplitudes, simplification of the previous method for evaluating the coefficients of master integrals, and explicit separation of the coefficients for box and pentagon integrals. These results will be useful for phenomenological purposes.

References

[1] R. Britto and B. Feng, "Integral Coefficients for One-Loop Amplitudes," JHEP **0802**, 095 (2008) [arXiv:0711.4284 [hep-ph]].